AMENDMENTS TO THE CLAIMS:

1. (Original) A method of processing data relating to historical performance series (A_1, A_2, ..., A_m) of markets and/financial tools to obtain a synthetic index (PROXYNTETICA) constituted by a series of performances (A_{x1}, A_{x2}, ..., A_{xn}) representative of various economical and financial scenarios, where the method comprises the following steps:

- acquiring data relating to a historical series ofm performances (A_1, A_2, ..., A_m),
- setting up a given number (n) representing the number of performances (A_{x1}, A_{x2}, ..., A_{xn}) to be produced for constituting the index (PROXYNTETICA),
- setting up a first number of probability levels (P_{min}, P_{min} and 50%) to utilize for defining control systems and a second number of probability levels (Pinf, P sup and 10 50%) to utilize for defining statistical scenarios,
- setting up (s) time intervals (T_1, T_2, ..., T_s) including the time interval (T^*) equal to the given number (n), in which particular mathematical constraints are to be verified between the curves of the control system originated by the performances (A_{x1}, A_{x2}, ..., A_{xn}) of the index (pROXYNTETICA) and the statistical scenarios obtained from the given historical performance series (A_1, A_2, ..., Am),
- calculating a number of statistical scenarios {Scenario (Pi, TJ) constructed in accordance with said second number of probability levels and the (s) time intervals, wherein $i \in [1...p]$ and $j \in [1...s]$,
- setting up a growing series of correlation values,
- selecting a non-linear programming algorithm for identifying the global optima,
- setting up said algorithm so that the same:
  a) assumes the (n) performances (A_{x1}, A_{x2}, ..., A_{xn}) as the unknown variables to be produced for constituting the synthetic index (pROXYNTETICA),

b) minimizes and/or maximizes a objective function (FO) obtained as a standard logarithmic deviation from the unknown variables (A_{x1}, A_{x2}, ..., A_{xn}), and

– setting up constraints for the algorithm implementing process, so that said algorithm calculates the unknown variables (A_{x1}, A_{x2}, ..., A_{xn}) for a minimum and/or maximum synthetic index (PROXYNTETICA min and/or PROXYNTETICA max).

2. (Original) The method according to claim 1, characterized in that said first number of probability levels for defining control systems is constituted of three probability levels (P_{min}, P_{min} and 50%) comprising an average probability level equal to 50%, a minimum probability level (P_{min}) < 50% and a maximum probability level (P_{max}) > 50%.

3. (Currently amended) The method according to claim 1~~-or 2~~, characterized in that said second number of probability levels for defining statistical scenarios is constituted of three probability levels (P_{inf}, P_{sup} and 50%) comprising an average probability level equal to 50%, a lower probability level (P_{inf}) < 50% and a higher probability level (P_{sup}) > 50%.

4. (Original) The method according to claim 3, characterized in that said number of statistical scenarios (Scenario (pi, Tj)) is equal to three statistical scenarios constructed in accordance to said three levels of probability (P_{inf}, P_{sup} and 50%).

5. (Currently amended) The method according to ~~any of the foregoing claims~~ claim 1, characterized in that said constraints imposed on said algorithm for calculating the minimum synthetic index (pROXYNTETICA min) comprise that:

a) the standard deviation DS of the problem variables (A_{x1}, A_{x2}, ..., A_{xn}) is to be greater than or equal to the average M of the standard deviations DS_k, calculated on the rolling of grade n of the given historical series (A_1 A_2, ..., A_m),

b) the value of the control system at the probability of 50% (P_{med}) constructed on the problem variables (A_{x1}, A_{x2}, ..., A_{xn}) is to coincide with the value of the statistical scenario calculated on the given m performances (A_1 A_2, ..., A_m), at the probability of 50% (P_{med}), both relating to the n-th time interval,

c) the values of control system of the problem variables (A_{x1}, A_{x2}, ..., A_{xn}) corresponding to the s time intervals and to the maximum probability (P_{max}) are to be lower than or coincident with the corresponding values of the statistical scenario calculated on the given historical series (A_1 A_2, ..., A_m) relating to the highest probability (P_{sup}),

d) the values of the control system of the problem variables (A_{x1}, A_{x2}, ..., A_{xn}) corresponding to the s time intervals and to the minimum probability (P_{min}) are to be higher than or coincident with the corresponding values of the statistical scenario calculated on the given historical series (A_1 A_2, ..., A_m) relating to the lowest probability (P_{inf}), and

e) the correlation between the n problem variables (A_{x1}, A_{x2}, ..., A_{xn}) and the last n performances of the given historical series (A_1 A_2, ..., A_m) is to be equal to the highest possible value among those given for the correlation.

6. (Currently amended) The method according to ~~any of the foregoing claims~~ claim 1, characterized in that said constraints imposed on said algorithm for calculating the maximum synthetic index (PROXYNTETICA max) comprise that:

a) the value of the control system at the probability of 50% (P_{med}) constructed on the problem variables (A_{x1}, A_{x2}, ..., A_{xn}) is to coincide with the value of the statistical scenario calculated on the given m performances (A_1 A_2, ..., A_m), at the probability of 50% (P_{med}), both relating to the time interval T*,

b) the values of control system of the problem variables (A_{x1}, A_{x2}, ..., A_{xn}) corresponding to the s time intervals and to the maximum probability (P_{max}) are to be higher than or coincident with the corresponding values of the statistical scenario calculated on the given historical series (A_1 A_2, ..., A_m) relating to the highest probability (P_{sup}),

c) the values of the control system of the problem variables (A_{x1}, A_{x2}, ..., A_{xn}) corresponding to the s time intervals and to the minimum probability (P_{min}) are to be lower than or coincident with the corresponding values of the statistical scenario calculated on the given historical series (A_1 A_2, ..., A_m), relating to the lowest probability (P_{inf}), and

d) the correlation between the n problem variables (A_{x1}, A_{x2}, ..., A_{xn}) and the last n performances of the given historical series (A_1 A_2, ..., A_m) is be equal to the highest possible value among those given for the correlation.

7. (Currently amended) The method according to claim 5 ~~or 6~~, characterized in that at each processing of said algorithm supplying a solution unacceptable under the constraint regarding the correlation between the n problem variables (A_{x1}, A_{x2}, ..., A_{xn}) and the last n performances of the given historical series (A_1 A_2, ..., A_m), the first value of correlation considered is the one lower than the current value.

8. (Currently amended) The method according to ~~any of the foregoing claims~~ claim 1, characterized in that said non-linear programming for identifying the global optima is an algorithm implemented in the GLOBSOL software.